

Adjusting the Process for Participatory Management through a Team Approach: A Case Study in North Central Sri Lanka

J. Medagama[‡]

INTRODUCTION

SMALL-SCALE IRRIGATION SYSTEMS in Sri Lanka are classified as irrigation works with command areas of **200** acres (80 hectares [ha]). The two main types of irrigation schemes are reservoir and weir systems. Reservoir systems, commonly called tank systems, were first constructed during the fifth century **B.C.** It has been estimated that there are about **23,000** small-scale irrigation systems of which **13,000** are reservoir systems. Small-scale irrigation systems account for 28 percent of the total rice production of the country while in 90 percent of the landholdings in small-scale irrigation systems the area of each holding is less than one acre (0.405 ha).

Small-scale irrigation systems are so vital to the economy of the rural sector that the state has taken the initiative to refurbish and modernize them. This is to be done using available local resources and with the assistance of foreign donors. One of the major foreign assisted small-scale irrigation-system projects in Sri Lanka is the Village Irrigation Rehabilitation Project. The Village Irrigation Rehabilitation Project **seeks** to increase cropping intensity and to **raise** farm income by improving the technical parameters of small-scale irrigation systems, mainly in reservoir systems in the *dry* zone. Initiated in 1981, the Village Irrigation Rehabilitation Project is nearing completion and it is hoped that a second phase will commence in mid-1990.

The project report of the Village Irrigation Rehabilitation Project envisages the implementation of a water-management program in the refurbished schemes through the fielding of Agricultural Planning Teams. In the initial stage of the project, an Agricultural Planning Team consisted of a Technical Officer and an Agricultural Instructor, with responsibility to formulate an improved water-management program for rehabilitated or modernized schemes. The Agricultural Planning

[‡] Deputy Commissioner and Head of the Water-Management Division, Department of Agrarian Services, Sri Lanka.

Team was not involved in the construction program. Physical rehabilitation or modernization was left to state-construction agencies. Accordingly, the Small-Scale Irrigation Rehabilitation Program had two separate components: rehabilitation and water management. As the Agricultural Planning Team consisted of two officials specializing in engineering and agronomy their main interest lay in technical matters. An Agricultural Planning Team was usually assigned a large volume of work. These and other factors resulted in poor performance in project implementation and paved the way for even greater state intervention.

In 1984, a research study was undertaken by the Agrarian Research and Training Institute with one of its objectives being to study rehabilitation procedures and to investigate whether existing procedures hindered subsequent operation and maintenance activities to be performed by beneficiaries. Another evaluation was undertaken by the Faculty of Agriculture of the University of Sri Lanka, to study the impact and performance of the Village Irrigation Rehabilitation Project. These studies identified several basic issues which are given below.

Absence of Consultation

One of the major findings of both studies was the insufficient beneficiary involvement in the process of physical rehabilitation. The Agrarian Research and Training Institute study found that **67** percent of the farmers in rehabilitated schemes felt that the state owned the **irrigation works**. In the evaluation done by the University of Sri Lanka, similar results were found. These findings show that there was **no** mechanism to elicit farmer involvement in the rehabilitation process.

Bureaucratic Orientation

The studies revealed that the bureaucracy was not oriented to rehabilitation of small-scale irrigation systems because their experience had been with large-scale **irrigation** construction projects involving complete resettlement programs.

Rigid Centralized Planning

Planning of organizational forms and design of structures was done at the **central** level and sent to the field for implementation with no serious thought given to its functionality. **In** the rehabilitation process blueprints were followed with no attempt to adapt the plans to **local needs**. As a result, beneficiaries often misused or even destroyed facilities. **In the early stages, measuring** devices were usually not used by beneficiaries as the purpose of these structures was never explained to the users.

Lack of Viable Farmer Organizations

The Village Irrigation Rehabilitation Project envisaged the creation of farmer organizations in a predetermined way. The proposal to organize a Tank Committee for each reservoir system was a theoretical exercise not based on reality. Beneficiaries were not prepared to form Tank Committees. Farmer organizations were thrust upon beneficiaries who were not allowed to develop their own forms gradually, and as a result, the organizations were not socially and functionally viable.

RESTRUCTURING INSTITUTIONAL ARRANGEMENTS

The Agrarian Research and Training Institute study recommended that the Agricultural Planning Team be strengthened by the inclusion of an Institutional Organizer such as had already been tested and proven successful in the Gal Oya Major Irrigation Rehabilitation Project. The reasons for including an Institutional Organizer in the Agricultural Planning Team are as follows:

1. To allow for the integration of physical-construction aspects and social-development aspects. Institutional Organizers would act as catalysts in organizing farmers for activities during pre-rehabilitation, rehabilitation, and post-rehabilitation phases.
2. Institutional Organizers would facilitate a dialogue between farmers and officials to the benefit of both parties.
3. Institutional Organizers would facilitate community development in systems to be rehabilitated and would, in particular, promote disadvantaged groups such as encroachers or landless peasants.
4. The Institutional Organizer unlike other members of the Agricultural Planning Team, could be from, and resident in, the village. This would contribute to the sustainability of the group even after the Agricultural Planning Team has moved on.
5. Institutional Organizers bring a wider range of interests to group formation. They do not limit themselves to water management but deal with broader agricultural and rural development concerns, creating a wider base for group sustainability.

THE AGRICULTURAL PLANNING TEAM UNDER THE DEPARTMENT OF AGRARIAN SERVICES

As part of this process, the Water-Management Division of the Department of Agrarian Services launched several pilot projects in north central Sri Lanka where a large number of indigenous

reservoir systems are found. As this division was responsible for modernization of reservoir schemes it was decided to test the alternative approaches in schemes identified for modernization.

With the assistance of the district administration, the Agricultural Planning Teams were established by mid-1987. Although the Village Irrigation Rehabilitation Project report envisaged the establishment of only one Agricultural Planning Team for the district it could not cope with the increased volume of work. Transportation was also a problem. Small-scale irrigation systems are scattered in remote areas throughout the district. It has since become necessary to form local Agricultural Planning Teams based at the local Agrarian Services Center. Each of these 38 Centers in the District of Anuradhapura in the north central region has a Technical Officer, an Agricultural Instructor, and a Divisional or Institutional Officer. The Divisional Officer is responsible for dealing with institutional aspects of the agricultural sector. This combination of engineering, agronomic, and institutional aspects has facilitated the understanding of problems related to irrigation development at the grass-roots level.

Orientation programs, training programs, workshops, and seminars for reorientation of officers assigned to the Agricultural Planning Team were held in the area. The need to diagnose and analyze the irrigation problems in an integrated manner was stressed. Not only was each professional exposed to his own discipline but he was given an opportunity to understand irrigation problems holistically. After the initial in-service training, members of the Agricultural Planning Team were given on-the-job training in specific reservoir schemes. They were expected to understand and diagnose the problems of the irrigation system in consultation with the farmer beneficiaries and in an interdisciplinary manner. In 1988, 341 Agricultural Planning Team officers were named. The importance of consultation between disciplines and of maintaining a continuous dialogue with farmer beneficiaries was essential to the success of the projects.

Another factor in the Agricultural Planning Team approach was cost-effectiveness. The fielding of Agricultural Planning Teams and the flexible approach applied have not added to the cost of the program. It needed only pooling of the available resources in a more meaningful manner to achieve the desired goal.

THE PILOT PROJECT

Six small irrigation schemes in north central Sri Lanka were chosen for the pilot project to test the new Agricultural Planning Team approach. Some schemes were selected to test different cropping patterns, others, to test improved operation and maintenance programs. Two schemes were selected with the express purpose of testing the process and procedures of farmer involvement in the physical construction program (Tank Modernization Program). These two reservoir systems were in working condition but with low efficiency, due to technical defects in the tank bund and the spill which prevented water storage. The sluices of these tanks were also not in proper working order causing a continuous unregulated flow. There were no proper channel systems in the command area resulting in water losses and in improper distribution, which in turn, created conflicts among the farmers.

From the initial identification stage the Agricultural Planning Team **organized** meetings of the beneficiaries to explain the **concept** of the modernization work. **These initial meetings and dialogues** gave the farmers some idea of the scope of the project. **The Agricultural Planning Team** met with the farmers to obtain **basic data** on the reservoir system. At this **preliminary** investigation stage the Agricultural Planning Team had to decide whether the Village **Irrigation** Rehabilitation Project selection criteria were satisfied. These criteria require **that at least 10** farm families and at least 8 ha must benefit for a scheme to **be** rehabilitated or modernized.

At the full investigation stage the Agricultural Planning Team collected **primary** data regarding technical, agronomic, and institutional **aspects**. The members of the Agricultural Planning Team by **this** time saw the construction program not only as a “technical **process**, but also as a social process.” **The** technical proposals were submitted to the farmer beneficiaries and their views solicited before the collection of technical data was undertaken.

In carrying out the various engineering surveys the **farmers** assisted the Agricultural Planning Team, especially by mobilizing their labor. **In** our experience, the farmers’ proposals regarding their requirements concerning the main construction components, e.g., **tank** bund, spill and sluices, merit serious and careful consideration. In many reservoir systems in the **north central area**, the general request from the farmers was to deepen the **tanks** by way of desilting the tank bed. Deepening and desilting of reservoirs would not normally yield economic results as it is a costly item. Desilting to increase reservoir capacity for additional irrigation is not normally cost-effective. The increase in **stored** water is, however, worthwhile if utilized for domestic purposes such as bathing, laundering, and watering cattle—especially during a **period** of **drought**.

At the design stage more dialogues **were** initiated with the farmers about the future irrigation-management programs for their reservoir systems. The Agricultural Planning Team collected **data to assist them in developing improved irrigation-management programs, including socioeconomic** studies done on a diagnostic basis, and surveys of the physical resources of the reservoir systems done by the Agricultural Planning Team agronomist. The socioeconomic study helped illuminate the social and economic status of **the** villages.

At the investigation stage special consideration was given by the Agricultural Planning Team to ensure that the design of the structures was compatible with the future irrigation-management programs. Complaints commonly **heard** were: that water could not be distributed in some parts of the service **areas**; that farm **turnouts** installed by the construction agencies were defunct; and that farmers could not divert **water** to their rice fields from these outlets. As part of the **preconstruction** process the Agricultural planning Team checked complaints with **the** beneficiaries concerned. It was also found to be important to select the **locations** for downstream structures together with the farmers. The walk-through of the system was done by the Agricultural Planning Team and the farmers together. At this stage, farmers cultivating adjacent blocks walked along the channel with the Agricultural Planning Team and decided **on** the correct location of new farm turnouts to be constructed.

The Agricultural Planning Team also had opportunities to negotiate with farmers regarding problems related to right of way. In the pilot-project **areas** farmers volunteered to donate **part** of their rice fields to construct canals. To make the construction program more compatible with the anticipated water-management program the farmers **suggested** having separate water courses **starting** from each farm turnout of a rotational unit. This invariably required farmers to donate more land. **In** one reservoir scheme 1.4 percent of the **total** command **area** was donated for this purpose. Not only farmers owning large plots but also those who owned only small **parcels**

donated the necessary areas without compensation. This gesture clearly shows that farmers understand the importance of the modernization program and the need to work together with government agencies.

In the pilot-project areas the Agricultural Planning Team was instrumental in getting contractors to work in close liaison with the farmers. In each scheme a committee of farmers was appointed to supervise and inspect the quality of work done by the contractors. In many schemes it was not just the committee which was responsible but beneficiaries themselves who took turns in supervising construction work. Seeing that their work was closely supervised by the farmers the contractors tended to be more careful and tried not to repeat mistakes. By this process, the farmers saw that the work was well-done and that the reservoir was built for them.

The Agricultural Planning Team helped to negotiate with contractors, in the deployment of local labor in some construction work, with payment to a revolving fund for use in operation and maintenance. The Agricultural Planning Team has made a point of having beneficiaries contribute, in the form of labor, a value equivalent to 10 percent of construction costs. There is no hard and fast rule regarding this free labor; however, the Agricultural Planning Team has always managed to organize *shramadana* (voluntary labor) to dig field channels, to clear light jungle at the tank site, to clear away anthills, and to do whatever other work the farmers felt they could undertake.

ACHIEVEMENTS

The above description of the processes during the preconstruction and construction stages shows that farmers feel their refurbished schemes belong to them rather than to the state. To inculcate this sense of ownership among the farmers the Agricultural Planning Team approached irrigation development in a holistic way. It was the synchronizing of the Agricultural Planning Team's nomothetic knowledge with the farmer beneficiaries' ideographic knowledge which has resulted in their feeling that the reservoir system belonged to them. A survey conducted in the modernized schemes revealed that over 90 percent of the farmers were satisfied with the construction program and over 90 percent felt that the reservoir belonged to them even after renovation by the state.

The greatest achievement in involving the beneficiaries in this process was that they themselves suggested carrying out a land consolidation of the rice fields. In one case, 18.21 ha (45 acres) belonged to 35 farmers; but the 18.21 ha (45 acres) were in 111 separate parcels. Some farmers had four to five parcels of rice fields at different places making it difficult to irrigate plots and to organize agricultural activities. This invariably resulted in poor productivity. Though there is no legal provision for land consolidation the Agricultural Planning Team took the initiative and arrangements were made to exchange rice-field parcels situated in different places and to block them together. This has made it easier for farmers to adhere to a meaningful irrigation-distribution system and to a more efficient operation and maintenance program. This example clearly shows that farmers have developed confidence in the Agricultural Planning Team and that the institution has been a useful facilitator in resolving their long-felt need.

Under the Village Irrigation Rehabilitation Project program, procedures for farmer organizations have been defined but experience has shown that merely adhering to procedures has not helped organizations to become viable. The concept of farmer organizations and their role was very vague to both the beneficiaries and the agencies. In the pilot-project areas, formal farmer organizations were never discussed in the initial stage. The Agricultural Planning Team allowed the water users to develop their capacities and capabilities during the preconstruction and construction stages. **As** the entire process took about one to one and half years, the Agricultural Planning Team was able to identify the farmers who would work with dedication and those farmers who could provide leadership. In many pilot-project areas, it was only a matter of time until a formal water-user organization was formed. By that time their role and tasks had been clearly identified. What the Agricultural Planning Team did was to modify and adjust the rigid procedures to allow the organizations to evolve.

The above discussion has shown that the new Agricultural Planning Team approach has yielded better results in the process of irrigation development. This does not mean that the Agricultural Planning Team approach was able to find solutions to all problems. Many issues **still** remain to be solved and the learning process must be continued. The experience gained so far has clearly been positive and we hope that the Agricultural Planning Team approach **will be** extended in a more meaningful manner with whatever corrective measures are necessary when **we** embark on the second phase **of** the Village Irrigation Rehabilitation Project next **year**.